

**Notice of Allowability**

Application No.

09/659,844

Examiner

Crystal J. Barnes

Applicant(s)

AMES ET AL.

Art Unit

2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Interview conducted on 07 December 2007.
2. ☒ The allowed claim(s) is/are 13-15 (renumbered claims 1-3).
3. ☒ The drawings filed on 27 August 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 20041208.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

### DETAILED ACTION

1. The following is a Notice of Allowance in response to the Interview conducted on 07 December 2004. Claims 1-12 have been cancelled. Claims 13 and 14 have been amended. Claims 13-15 remain pending in this application.

### EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jane Barrow, Reg. No. 34,217 on 07 December 2004.

The application has been amended as follows:

#### IN THE SPECIFICATION:

Amendment to the Specification

Page 2 line 7 from bottom, deleted "a connector of type surface 45" and inserted --a connector of type surface 46--.

**IN THE CLAIMS:**

Claims 1-12, cancelled the claims.

Claims 13, page 5 line 9 from last line of claim; deleted "said second parametric geometric base entity" and inserted --a second parametric geometric base entity--.

Claims 14, page 6 line 9 from last line of claim; deleted "said second parametric geometric base entity" and inserted --a second parametric geometric base entity--.

**REASONS for ALLOWANCE**

3. Claims 13-15 are allowed.

4. The following is an examiner's statement of reasons for allowance:

As per claim 13, the prior art of record taken alone or in combination fails to teach defining by instantiation a geometric data entity, wherein each of geometric data entity is selected from a group consisting of at least one Cartesian location, at least one Ppoint entity, at least one Pcurve entity, at least one Edge entity, at least one CoEdge entity, at least one CoPoint entity, at least one EdgeLoop entity, at least one Surface entity, at least one Face entity, at least one

OrientedClosedShell entity and at least one Solid entity; and defining an overlapping of at least two EdgeLoop boundaries sharing said Surface entity.

As per claim 14, the prior art of record taken alone or in combination fails to teach defining by instantiation a geometric data entity, wherein each of said geometric data entity is selected from a group consisting of at least one Cartesian location, at least one Ppoint entity, at least one Pcurve entity, at least one Edge entity, at least one CoEdge entity, at least one CoPoint entity, at least one EdgeLoop entity, at least one Surface entity, at least one Face entity, at least one OrientedClosedShell entity and at least one Solid entity; and defining a sharing of an Edge entity by 2 or more EdgeLoop entities sharing said Surface entity.

As per claims 15, the prior art of record taken alone or in combination fails to teach defining by instantiation a geometric data entity, wherein each of said geometric data entity is selected from a group consisting of at least one Cartesian location, at least one Ppoint entity, at least one Pcurve entity, at least one Edge entity, at least one CoEdge entity, and at least one CoPoint entity; and said CoEdge entity contains a single n-dimensional function that contains the domain space of each Edge entity as a range coefficient of CoEdge function.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

*Conclusion*

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of the art with respect to geometrical modeling of structures in general:

USPN 6,820,043 B2 to Mallet et al.

USPN 6,816,819 B1 to Loveland

US Pub. No. 2004/0236549 A1 to Dalton

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Crystal J. Barnes whose telephone number is 571.272.3679. The examiner can normally be reached on Monday-Friday alternate Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 571.272.3687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Anthony Knight  
Supervisory Patent Examiner  
Group 3600

CJB  
8 December 2004